

## (12) United States Patent Shimada

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# (54) SCANNING OPTICAL MICROSCOPE

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250/458.1; 356/300, 310, 319, 320, 326

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#### **ABSTRACT** (57)

A scanning optical microscope comprising a laser source, a scan optical system for scanning a sample with a laser beam from the laser source, a spectral resolving optical system for resolving spectra of fluorescent rays from the sample, a wavelength splitting optical system for splitting the fluorescent rays that have passed the spectral resolving optical system into rays of a plurality of different wavelengths and guiding the split rays to optical paths of the plurality of different wavelengths, a plurality of image forming optical systems, respectively provided in the optical paths of the plurality of different wavelengths, for forming images of the fluorescent rays from the sample, a plurality of confocal apertures respectively provided in the optical paths at focal points of the image forming optical systems, and a plurality of photosensors, respectively provided in the optical paths, for sensing the fluorescent rays from the sample that have passed the respective confocal apertures.

### 6 Claims, 6 Drawing Sheets

